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HEADQUARTERS
U. S. ARMY SECTION
MILITARY ASSISTANCE ADVISORY GROUP
APO 143, San Francisco, California

MAGAR-OT (S&A)

8 September 1962

MEMORANDUM FOR: See Distribution

SUBJECT: Lessons Learned Number 22 (U)

1. (U) GENERAL: The following are lessons learned in the operations of U. S. Army helicopters in a counterinsurgency role. They are derived from local experience promulgated by the 45th Transportation Battalion (Trans Acft) and although they deal with the operations of the H-21 type helicopter, they do have application to all helicopter operations. No technical data is included. Certain of the data has been included in earlier "lessons" but is repeated for emphasis and because of the importance and relevance to successful helicopter operations represented by these experience factors.

2. (~~KC~~) LESSONS LEARNED:

a. Contour flying offers the best possible means of security the movement of the helicopters but it need not be used from the departure airfield to LZ. The strain of extended "nap of the earth" flying reduces crew efficiency. The best compromise seems to be flying above 1500 feet-(this altitude has been selected because VC presently only employ a small arms anti-air capability and few hits are made on aircraft flying above 1500 feet). When 10 to 15 miles from the objective area, a rapid descent to the contour level is made and the final approach is made "on the deck". In this manner surprise is retained and the crew can avoid the constant strain of long periods of contour flying.

b. Airborne reconnaissance, especially if made by a troop carrying type helicopter, will alert VC units in the objective area. Reconnaissance is, however, necessary to assist the aviators in determining flight routes, landing zones, hazards and key navigation points. Alternate routes to and from the objective areas must be determined, as well as alternate landing zones. As many as possible of the helicopter aviators should be familiar with the area to facilitate changes in plan of maneuver once the operation is under way. This reconnaissance should be made in a type aircraft that

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habitually flies over the area but is not associated with the actual operation. The Otter (U-1A), the Beaver (L-20), the Bird Dog (L-19) or, when available, the Seminole (L-23) can be used for this reconnaissance. Performance of this reconnaissance two to three days in advance of the operation is desirable. Care must be taken to avoid revealing the purpose of the flight; one flight over the area without turns or maneuvers is desirable. Photographs may be used to good advantage in determining whether or not obstacles are present that can not be detected visually by a high reconnaissance.

c. Due to the vulnerability of troop carrying helicopters immediately prior to, during and immediately after the assault landing, attempts to land on enemy concentrations should be avoided. LZ's should be close to objectives and there should be no obstacles to the rapid movement of the foot troops from the LZ to the objective. Final LZ selection should be made by the helicopter commander based on the recommendations of the ground commander.

d. Multiple lifts to the same LZ using the same approach and departure routes must be avoided. Experience indicates that the VC are quick to position riflemen along established routes or air corridors. In-bound or out-bound helicopters can expect heavy ground fire when the same routes are used by multiple lifts into the same LZ.

e. A fixed wing aircraft, L-19, L-20, U-1A or similar aircraft) should act as an airborne CP during operations until control can be passed to the ground command group. It can assist in directing helicopters which are approaching LZ's "on the deck" to their assigned landing areas. This technique is particularly valuable in poorly mapped areas or when the terrain "all looks the same" as it does in the Mekong Delta.

f. A "V" formation of 3 or 5 aircraft appears to be the most flexible and satisfactory formation for daylight operations. It places maximum troops on the ground in shortest time; it is easy to control and exposes aircraft to ground fires from any single point for the shortest time possible. "Trail" formation should not be used unless no other choice is possible. LZ size will ultimately determine whether the "V" formation can be employed for there must be room to land three or five helicopters simultaneously without adverse effect from turbulance caused by adjacent helicopters.

g. Night airmobile operations are feasible provided that weather (visibility, low percentage of cloud cover, a visible horizon, some natural moonlight, etc.) and navigational aids permit. "Pinpoint" navigation in the Delta and in the highland jungle areas is difficult in daylight; at night while flying low it is even more difficult. Operations beneath the radar horizon and below line of sight which denies VHF navigation compound the problem. Under these circumstances, the use of terminal guidance beacons and pathfinders offers the best chance for accurate terminal navigation until suitable "hardware" can be developed.

h. It has proved wise to always dispatch helicopters in pairs. Very few excess hours are generated since single aircraft missions are quite rare and then usually a mission can be found for the "extra" aircraft. The pair of aircraft protect one another and pick up survivors in the event one aircraft should go down. This system has paid off in SVN and both passengers and crew are confident that immediate rescue operations will be initiated if an aircraft is downed.

i. Armed escort of heliborne operations reduces hostile attacks on helicopters and should be employed whenever available. Close air support "covering" a helicopter movement must respond to requests for support by the helicopter flight leader. Since he knows the situation as it affects the helicopters and their cargo, he must have the authority to request airstrikes to cover their movement and landing. Therefore, the helicopter flight leader must be capable of acting as a forward air controller.

j. The H-21 helicopter carries a great deal of equipment which is not essential to the troop transport mission and reduces the lift capability of the aircraft. In SVN, troop seats, heaters, some electronic equipment, litter straps and brackets, cabin doors, cabin insulation and sound proofing and other miscellaneous equipment have been removed to increase lift capability.

k. Some capability for delivery of suppressive fires from the helicopters is required. Although several combinations of weapons are available, the best compromise seems to be one 30 caliber machine gun in the forward door of the H-21 and an M-2 carbine for the crew chief stationed at the rear door. This combination does provide limited capability for suppressive fires, provides protection for the aircraft and crew should it be forced down and yet does not overload the helicopter with defensive weapons. It was found that a second 30 caliber machine gun mounted at the rear door delayed the off loading of troops during assault landings.

3. (U) The foregoing is for your information and guidance.

SIGNED

H. K. EGGLESTON
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Chief

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